

		404		445
	Xanthomonas albilineans	285018780	RVPFLDVEFLEVAMRMDAQHKMAGTR	ADGSK RIEKAVLREAF
	Xanthomonas campestris	289670204	-----R---D-----SF--IDKT	SS-AT -M--G-----
	Xanthomonas oryzae	166712717	-----R---D-----SF--IDKT	SS-AA -M--G-----
	Xanthomonas fuscans	294665428	-----R---D-----RF--IDKT	SS-AT -M--G-----
	Xanthomonas axonopodis	21242186	-----R---D-----RF--IDKT	SS-AT -M--G-----
	Xanthomonas perforans	325928403	-----R---D-----RF--IDKT	SG-AT -M--G-----
	Xanthomonas campestris	78047046	-----R---D-----RF--IDKT	SG-AA -M--G-----
Xanthomonadales	Xanthomonas gardneri	325921718	-----R---D-----SF--IDKT	SG-AM -M--G-----
	Xanthomonas vesicatoria	325913967	-----R---D-----SF--IDKT	ST-AT -M--G---Q--
	Xylella fastidiosa	71275914	-----R---D-----VDKT	SN-PQ -M--GI--A--
	Pseudoxanthomonas spadix	357417890	-----R---D-----S---ITVG	---K- -M--G-----
	Pseudoxanthomonas suwonensis	319786523	-----R---D-----KY--VLKG	S--PQ -M--GI--Q--
	Stenotrophomonas sp. SKA14	254525303	-----R---D---F--A---V-AG	F-GR -M--G-----
	Stenotrophomonas maltophilia	194365058	-----R---D---F--A---V-AG	F-GR -M--G-----
	Rhodanobacter sp. 2APBS1	352081994	-----L--ID---GL--A---QK	-----
	Aeromonas hydrophila	117619348	-----K--MD---LQPAD--C-KG	K---HI-----
	Aeromonas salmonicida	145299448	-----K--MD---LQPAD--C-NG	K---HI-----
	Aliivibrio salmonicida	209694406	-----K--ID---LNP-D--C-NG	KM--HI---C-
	Citrobacter youngae	283834038	-----KK--D---INP-D--C-NG	KM--H---C-
	Colwellia psychrerythraea	71278785	-----KN-MD---INPED-LC-NG	KM---I---S-
	Cronobacter sakazakii	156934825	-----KK--D---INP-D--C-NG	KM--HI---C-
	Dickeya dadantii	271499720	-----KK--D---INPKD--C-NG	KM--HI---C-
Edwardsiella tarda	269139968	-----KA--D---LNPRD--C-SG	---QL---C-	
Enterobacter cancerogenus	261341276	-----KK--D---INP-D--C-NG	KM--HI---C-	
Escherichia albertii	170767928	-----KK--D---INP-D--C-NG	KM--HI---C-	
Escherichia coli	110640885	-----KK--D---INP-D--C-NG	KM--HI---C-	
Klebsiella pneumoniae	206575898	-----KK--D---INP-D--C-NG	KM--H---C-	
Other Bacteria (0/500)	Moritella marina	6691648	-----K--VDAS--LNPEL--ITGD	---NII---
	Moritella sp. PE36	149909581	-----K--IDT---LNPEL--ITGD	---NII---
	Pectobacterium atrosepticum	50120262	-----KN--D---INPRD--C-NG	KM--HI---C-
	Photobacterium profundum	54308220	-----K--D---INPED--C-NG	KM--HI---C-
	Psychromonas ingrahamii	119944862	-----K--MD---TNPEL--IKDG	---NI---
	Salmonella enterica	167553960	-----KK--D---INP-D--C-NG	KM--H---C-
	Shewanella sediminis	157374977	-----K--MD---INPEA--SKDG	K---HI---Q--
	Shigella sonnei	74311201	-----KK--D---INP-D--C-NG	KM--HI---C-
	Sodalis glossinidius	85058791	-----KQ--D---INP-D--C-NG	K---H---C-
	Tolomonas auensis	237808953	-----K--MD---LNPKD--C-NG	K---HIV--T-
	Vibrio alginolyticus	91225923	-----K--ID---LNPAD--C-NG	KM--HI---C-
	Vibrio cholerae	147673054	-----K--ID---LNPAD--C-NG	KM--HI---C-
	Yersinia pestis	22125101	-----KN--D---INP-D--C-NG	KM--HI---C-

Figure S27

Partial sequence alignment of a conserved region of asparagine synthase b protein that is showing a 4-5 aa insert, uniquely shared by all Xanthomonadales except *Rhodanobacter* sp. 2APBS1. The species belonging to *Stenotrophomonas* can also be separated from other Xanthomonadales because of having only 4 aa insert at the same position.